

Mathematical Sciences Major/Minor List For 2021

This list applies to the following programs:

- Bachelor of Arts
- Bachelor of Arts (Advanced)
- Bachelor of Arts (Advanced) with Bachelor of Laws
- Bachelor of Arts (Advanced) with Bachelor of Laws (Honours)

MAJOR	MINOR
<p>24 units of courses including:</p> <ul style="list-style-type: none"> • Level 1: at least 3 units and no more than 6 units • Level 2: at least 3 units • Level 3: at least 12 units including the capstone course <p>The simplest way to plan your major is:</p> <ul style="list-style-type: none"> • Level 1: 6 units • Level 2: 6 units • Level 3: 12 units including 6 unit capstone course 	<p>18 units of courses including:</p> <ul style="list-style-type: none"> • Level 1: at least 3 units and no more than 6 units • Level 2: at least 3 units • Level 3: at least 6 units <p>The simplest way to plan your minor is:</p> <ul style="list-style-type: none"> • Level 1: 6 units • Level 2: 6 units • Level 3: 6 units (no capstone required)

Term	Course code	Course name	Units
Level 1			
All students must complete the following course:			
S1/S2	MATHS	1011 Mathematics IA	3
Summer/S1/S2	MATHS	1012 Mathematics IB *	3
S1/S2	MATHS	1013 Mathematics IM @	3
@ Course for students who do not meet the prerequisite for Mathematics IA - not counted towards the major.			
Level 2 (A minimum of 3 units at level 1 must be taken before taking level 2 courses)			
Plus 6 units from the following:			
S2	MATHS	2100 Real Analysis II *	3
S1	MATHS	2101 Multivariable & Complex Calculus II *	3
S1	MATHS	2102 Differential Equations II *	3
S1	MATHS	2103 Probability & Statistics II *	3
S2	MATHS	2104 Numerical Methods II * (<i>incompatible: MATHS 2107</i>)	3
S1	PURE MTH	2106 Algebra II *	3
S2	STATS	2107 Statistical Modelling and Inference II *	3
Level 3 (A minimum of 3 units at level 2 must be taken before taking level 3 courses)			
Plus 6 units from the following:			
S1	APP MTH	3001 Applied Probability III *	3
S1	APP MTH	3002 Fluid Mechanics III *	3
S1	APP MTH	3014 Optimisation III *	3
S2	APP MTH	3016 Random Processes III *	3
S1	APP MTH	3021 Modelling with Ordinary Differential Equations III *	3
S2	APP MTH	3023 Partial Differential Equations and Waves III *	3
S2	MATHS	3012 Financial Modelling: Tools & Techniques III *	3
S2	MATHS	3026 Cryptography III *	3

Please read ALL pages of this document. Courses that may be available to study in subsequent years are detailed over page.

S1	PURE MTH	3002	Topology and Analysis III *	3
S1	PURE MTH	3007	Groups and Rings III *	3
S1	PURE MTH	3019	Complex Analysis III *	3
S2	PURE MTH	3023	Fields and Modules III *	3
S1	STATS	3001	Statistical Modelling III *	3
S1	STATS	3006	Mathematical Statistics III *	3
S2	STATS	3022	Data Science III *	3
S2	STATS	3023	Computational Bayesian Statistics III *	3
Capstone (Major Only) (A minimum of 15 units in the major must be completed before taking the capstone)				
S2	MATHS	3021	Capstone Project in Mathematical Sciences III *(incompatible MATHS 3020)	6

* Courses have pre-requisites. Please check [Course Planner](#) before enrolling!

Courses not offered 2021 that may be available to study in subsequent years:

Level 2				
APP MTH	2105	Optimisation and Operations Research II *		3
Level 3				
APP MTH	3020	Stochastic Decision Theory III		3
APP MTH	3022	Optimal Functions and Nanomechanics III		3
PURE MTH	3009	Integration and Analysis III *		3
PURE MTH	3022	Geometry of Surfaces III		3
PURE MATH	3024	Finite Geometry III		3
STATS	3003	Sampling Theory and Practice III		3
STATS	3005	Time Series III		3
STATS	3008	Biostatistics III		3